



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,428	03/09/2004	David Boyd Whitten	13039:90Div (CRAN18-00090)	1871
23990	7590	05/16/2006	EXAMINER	
DOCKET CLERK P.O. DRAWER 800889 DALLAS, TX 75380			TRAN, KHOI H	
			ART UNIT	PAPER NUMBER
			3651	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/796,428	Applicant(s) WHITTEN ET AL.	
	Examiner Khoi H. Tran	Art Unit 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-23,34,35,40-55 and 57-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-23,34,35 and 58-60 is/are allowed.
- 6) ☒ Claim(s) 53-55,57,61-67 and 70-72 is/are rejected.
- 7) ☒ Claim(s) 40-52, 68, and 69 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

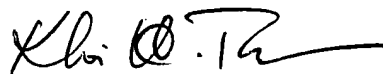
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



KHOI H. TRAN
PRIMARY EXAMINER

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/04, 11/05</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____. |
|--|---|

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 40 and 72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to amended claim 40, line 9, the scope of the phrase “the monitoring system a plurality of light emitters” is not distinct.

In regards to claim 72, “apertures” lacks antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 53 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Toth 4,252,250.

Toth '250 comprises a method of enabling vending verification per claimed invention. The method provides an ordering and product delivery system for dispensing a product from a storage position. Toth '250 method provides a monitoring system along the delivery path for detecting product delivery. The monitoring system scans the delivery path for passage of the product. The monitoring system comprises a set of

light emitters 27/35 and respective set of detectors 29/39 for detecting when a product passes along the delivery path from an output of the set of detectors. The emitters are located behind apertures (Figures 3 and 4). The emitters are sequentially activated. The detectors are located across from respective emitters. The monitoring system comprises logic circuit connected to the detectors.

5. Claims 55 and 61 are rejected under 35 U.S.C. 102(e) as being anticipated by Hair, III et al. 6,384,402.

Hair, III et al. '402 disclose a method of enabling verification of the delivery of an ordered product in a vending system per claimed invention. Hair, III et al. '402 method provides a product delivery system and a monitoring system for monitoring delivered products (Figures 1-3). The monitoring system optically scans the delivery path of the vending system for passage of the product. The monitoring system comprises plurality of light emitters (Figure 2) and plurality of light detectors (Figures 2 and 3A). The detectors detect a change in a light from the light emitters. The light emitters and the light detectors are aligned such that the spacing between detectible beams therebetween accounts for the smallest product that passes along the delivery path. The detectible beams comprise portions of light emitted from the light emitters that are detected by an aligned light detector and two light detectors adjacent to the aligned light detector. Note, when Hair, III et al. '402 monitoring system comprises three arches (column 6, line 40), three detectors will be present to detect portions of light emitted from the emitters.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toth 4,252,250.

Toth '250 discloses all elements per claimed invention as explained in paragraph 4 above. However, it is silent as to the specifics of the emitters cycle the pulses based on the shortest delivery path travel time of a product to past the monitoring system. Nevertheless, this feature would have been obvious in Toth '250 to prevent misdetection of passing products. In other words, the cycle of pulses from Toth '250 emitters would have to be faster than the falling products.

8. Claims 62-65 and 70 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Provonost 3,746,863.

Provonost '863 discloses method steps of: providing a row of light emitters; providing a row of light detectors opposite the light emitters, each light detector substantially aligned with one of the light emitters, wherein light from each light emitter, when activated, impinges upon a plurality of the light detectors; providing a controller individually and sequentially activating the light emitters in a cyclic manner; and providing logic generating a first logical signal when portions of light emitted by an activated one of the light emitters are detected at all of two or more of the light detectors

and a second logical signal when at least one portion of the light emitted by the activated light emitter is not detected at least one of the two or more light detectors (Figures 1-9). It is obvious if not inherent that the system of Provonost '863 is applicable in a vending machine since it anticipates all claimed method steps.

It is obvious that cycle of light emitting pulses from Provonost '863 emitters would have to be faster than the detected traveling object/product in order to prevent misdetection.

It is obvious that Provonost '863 system is designed to detect a predetermined smallest detectable object/product.

9. Claims 62-65 and 70 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over De Missimy et al. 3,805,061.

De Missimy et al. '061 disclose method steps of: providing a row of light emitters; providing a row of light detectors opposite the light emitters, each light detector substantially aligned with one of the light emitters, wherein light from each light emitter, when activated, impinges upon a plurality of the light detectors; providing a controller individually and sequentially activating the light emitters in a cyclic manner; and providing logic generating a first logical signal when portions of light emitted by an activated one of the light emitters are detected at all of two or more of the light detectors and a second logical signal when at least one portion of the light emitted by the activated light emitter is not detected at least one of the two or more light detectors (Figures 1-8). It is obvious if not inherent that the system of De Missimy et al. '061 is applicable in a vending machine since it anticipates all claimed method steps.

It is obvious that cycle of light emitting pulses from De Missimy et al. '061 emitters would have to be faster than the detected traveling object/product in order to prevent misdetection.

It is obvious that De Missimy et al. '061 system is designed to detect a predetermined smallest detectable object/product.

10. Claims 66 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Provonost 3,746,863 in view of Hair, III et al. '402.

In regards to claim 66, Provonost '863 discloses all elements per claimed invention per paragraph 8 above. However, it is silent as to the specifics of adjusting the power of the emitting light from the emitters.

Hair, III et al. '402 teach adjusting intensity of light emitters provides fine tune adjustment to the optical sensing system in relation to ambient visible light.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have adjusted the power of the emitting light from the emitters, as taught by Hair, III et al. '863, because it facilitates fine tune adjustment to the optical sensing system in relation to ambient visible light.

In regards to claim 67, Provonost '863 discloses all elements per claimed invention per paragraph 8 above. However, it is silent as to the specifics of subjecting the system to a calibration mode.

Hair, III et al. '402 teach calibrating optical sensing system prior of actual usage is commonly done to ensure system 's operational integrity.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have calibrated Provonost '863 system prior of actual usage because it ensures system 's operational integrity, as taught by Hair, III et al. '402.

11. Claims 66 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Missimy et al. 3,805,061 in view of Hair, III et al. '402.

In regards to claim 66, De Missimy et al. '061 disclose all elements per claimed invention per paragraph 9 above. However, it is silent as to the specifics of adjusting the power of the emitting light from the emitters.

Hair, III et al. '402 teach adjusting intensity of light emitters provides fine tune adjustment to the optical sensing system in relation to ambient visible light.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have adjusted the power of the emitting light from the emitters, as taught by Hair, III et al. '863, because it facilitates fine tune adjustment to the optical sensing system in relation to ambient visible light.

In regards to claim 67, De Missimy et al. '061 discloses all elements per claimed invention per paragraph 9 above. However, it is silent as to the specifics of subjecting the system to a calibration mode.

Hair, III et al. '402 teach calibrating optical sensing system prior of actual usage is commonly done to ensure system 's operational integrity.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have calibrated De Missimy et al. '061 system prior of actual

usage because it ensures system 's operational integrity, as taught by Hair, III et al. '402.

12. Claims 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Provonost 3,746,863 in view of Toth 4,252,250.

In regards to claim 71, Provonost '863 discloses all elements per claimed invention per paragraph 8 above. However, it is silent as to the specifics of filtering out ambient visible light from the generated infrared lights.

Toth '250 teaches that filtering out ambient visible light from an infrared sensing system reduces interferences and prevents error readings.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have filtered out ambient visible light from Provonost '863 infrared sensing system because it reduces interferences and prevents error readings, as taught by Toth '250.

In regards to claim 72, Provonost '863 discloses all elements per claimed invention per paragraph 8 above. However, it is silent as to the specifics of reducing unwanted light from reaching the detectors by providing apertures between the emitters and detectors.

Toth '250 teaches that apertures between light emitter and detector reduces undesired light from reaching the detectors. Toth '250 teaches that providing apertures between optical emitter and detector provides another means to reduce interferences and to prevent error readings.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided Provonost '863 infrared sensing system with apertures locating between the optical emitter and detector, as taught by Toth '250, because it provides another means to reduce interferences and to prevent error readings.

13. Claims 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Missimy et al. 3,805,061 in view of Toth 4,252,250.

In regards to claim 71, De Missimy et al. '061 disclose all elements per claimed invention per paragraph 9 above. However, it is silent as to the specifics of filtering out ambient visible light from the generated infrared lights.

Toth '250 teaches that filtering out ambient visible light from an infrared sensing system reduces interferences and prevents error readings.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have filtered out ambient visible light from De Missimy et al. '061 infrared sensing system because it reduces interferences and prevents error readings, as taught by Toth '250.

In regards to claim 72, De Missimy et al. '061 disclose all elements per claimed invention per paragraph 9 above. However, it is silent as to the specifics of reducing unwanted light from reaching the detectors by providing apertures between the emitters and detectors.

Toth '250 teaches that apertures between light emitter and detector reduces undesired light from reaching the detectors. Toth '250 teaches that providing apertures

between optical emitter and detector provides another means to reduce interferences and to prevent error readings.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided De Missimy et al. '061 infrared sensing system with apertures locating between the optical emitter and detector, as taught by Toth '250, because it provides another means to reduce interferences and to prevent error readings.

Allowable Subject Matter

14. Claims 16-23, 34, 35, and 58-60 are allowable over the prior art of record.

Claim 40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 41-52 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 68 and 69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

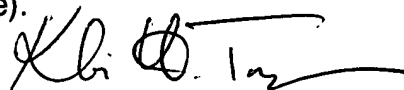
Conclusion

15. Additional references made of record and not relied upon are considered to be of interest to applicant's disclosure: see attached USPTO Form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoi H. Tran whose telephone number is (571) 272-6919. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Khoi H Tran
Primary Examiner
Art Unit 3651

KHT
05/10/2006